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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ZEWDU, MELESS NMN

ART UNIT

PAPER NUMBER

2683

DATE MAILED: 03/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/034,938	Applicant(s) LACHTAR ET AL.	
	Examiner Meless N Zewdu	Art Unit 2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,13-15 and 25-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,13-15 and 25-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This action is in response to the communication filed on 10/22/04.
2. Claims 4-12, 16-24 and 30-36 are canceled.
3. Claims 1-3, 13-15 and 25-29 are pending in this action.
4. This action is final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 13-15 and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma in view of George (US 5,214,789).

As per claim 1: a wireless communication system that provides wireless service to a mobile unit operating on one of a first carrier frequency and a second carrier frequency within a service area, the first and second carrier frequencies being in the same or different bands, the wireless communication system comprising:

at least one base station controller, the at least one base station controller producing a capacity request in response to a request made by the mobile unit on an

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originating carrier frequency of the first and second carrier frequencies reads on '871 (see col. 5, lines 7-17).

a first plurality of base stations coupled to the at least one base station controller, the first plurality of base stations operating on a first carrier frequency, at least one candidate base station of the first plurality of base stations receiving the capacity request, determining its net excess capacity based upon available forward link resources and available reverse link resources, and responding with a net excess capacity response reads on '871 (see col. 13, lines 18-38, particularly lines 22-29).

a second plurality of base stations coupled to the at least one base station controller, the second plurality of base stations operating on a second carrier frequency, at least one candidate base station of the second plurality of base stations receiving the capacity request, determining its net excess capacity based upon available forward link response and available reverse link resources, and responding with a net excess capacity response reads on '871 (see col. 13, lines 18-38, particularly lines 30-38).

and the at least base station controller operating to assign the mobile unit by selecting at least one servicing base station from the candidate base stations based upon the received net excess capacity response reads on '871 (see abstract; fig. 1, elements 104 and 106; col. 4, line 64-col. 5, line 36). But Sharma does not explicitly teach about selecting the originating carrier frequency despite a higher priority for the other of the first and second carrier frequencies, as claimed by applicant. The interpretation of this difference feature is channel allocation based on position or location. However, George teaches that radio frequency channel can be allocated

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based on position or location (see title; fig. 4; col. 1, line 65-col. 2, line 45). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Sharma with that of George for the advantage of avoiding a waste of channel capacity and an inter-zone link when communication is only required within one zone (see col. 1, lines 45-52).

As per claim 2: the wireless communication system wherein, inadequate capacity is indicated in the excess capacity response for the originating carrier frequency reads on '871 (see fig. 5B, blocks 528, 526 and 540; col. 9, lines 12-38) and further including:

the at least one base station controller selecting the other of the carrier frequencies than the originating carrier frequency reads on '871 (see col. 4, line 64-col. 5, line 17).

As per claim 3: the wireless communication system wherein at least one of the frequencies other than the originating carrier frequency has an assigned high priority reads on '871 (see fig. 5A, block 524; fig. 5B, block 536; col. 9, lines 29-38) and further including:

the at least one base station controller waiting a specified time period for a capacity estimate response for carrier frequencies of the assigned high priority reads on '871 (see fig. 5A, block 506 and fig. 6A, block 606; col. 7, line 66-col. 8, line 5).

when the capacity estimate response from the at least one of the high priority carrier frequencies is positive, the at least one base station controller selecting a servicing base station from the candidate base stations based upon the received positive excess capacity responses for the at least one of the high priority carrier

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frequencies reads on '871 (see abstract; fig. 5A, blocks 502, 504, 520, 524 and 522; col. 9, lines 29-39).

the at least one base station controller servicing the mobile unit with the selected servicing base station on the at least one of the high priority carrier frequencies reads on '871 (see abstract; fig. 5A; col. 9, lines 12-38).

As per claim 13: the features of claim 13 are similar to the features of claim 1 except the following differences. Hence, claim 13 is rejected on the same ground as claim 1 and the difference features are provided as shown below.

determining an operational position of the mobile unit based upon location of a base station receiving the request reads on 871 (see col. 14, lines 28-36).

based upon the operational position of the mobile unit, requesting capacity information from candidate base stations of the first plurality of base stations and candidate base station of the second plurality of base stations reads '871 (see col. 14, lines 37-41). But, Sharma does not explicitly teach about selecting the originating carrier frequency despite a higher priority for the other of the first and second carrier frequencies whenever adequate capacity is indicated in the excess capacity responses for the originating carrier frequency, as claimed by applicant. This feature is directed to channel allocation based on location or position. However, in a related field of endeavor, George teaches that channels can be allocated to a mobile location based on its location (see title; col. 1, line 65-col. 2, line 45). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Sharma with that of George for the advantage of avoiding a waste of

channel capacity and an inter-zone link when communication is only required within one zone (see col. 1, lines 45-52).

As per claim 14: the method wherein inadequate capacity is indicated in the excess capacity responses for the originating carrier frequency during the step of receiving net excess capacity responses, and wherein the step of selecting comprises the step of:

selecting the other of the carrier frequencies than the originating carrier frequency reads on '871 (see col. 13, lines 39-44).

As per claim 15: the method wherein, at least one of the frequencies other than the originating carrier frequency has an assigned high priority, and further including the steps of:

waiting a specified time period for a capacity estimate responses for carrier frequencies of the assigned high priority reads on '871 (see fig. 5A, block 506 and fig. 6A, block 606; col. 7, line 66-col. 8, line 5).

when the capacity estimate response from the at least one of the high priority carrier frequencies is positive, selecting a servicing base station from the candidate base stations based upon the received positive excess capacity responses for the at least one of the high priority carrier frequencies reads on '871 (see abstract; col. 9, lines 29-39).

As per claim 25: a computer readable medium that is readable by at least one component of a wireless communication system that includes a first plurality of base stations that operate on a first carrier frequency and a second plurality of bas stations that operate on a second carrier frequency and that support a mobile unit, the first and

second carrier frequencies being in the same or different bands, and the first plurality base stations and the second plurality of base stations providing overlaying service reads on '871 (see fig. 1; abstract; col. 2, line 41-col. 3, line 30), the computer readable medium comprising:

a set of instructions that, when executed by the wireless communication system, causes the wireless communication system to perform the following: receive a request from a mobile unit on one of the first and second carrier frequencies as an originating carrier frequency reads on '871 (see col. 14, lines 30-33); determine an operational position of the mobile unit based upon the location of a base station receiving the request reads on '871 (see col. 14, lines 34-36); based upon on the operational position, of the mobile unit, request capacity information from candidate base stations of the first plurality of base stations and candidate base stations of the second plurality of base stations reads on '871 (see col. Col. 14, lines 37-42); receive net excess capacity report from the candidate base stations, each net excess capacity response based upon available forward link resources and available reverse link resources for a respective candidate base station (reads on '871 (see col. 14, lines 43-47); select at least one servicing base station at the originating carrier frequency from the candidate base stations based upon the received net excess capacity response reads on '871 (see col. 14, lines 30-54). But, Sharma does not explicitly teach about--- service the mobile unit with the selected servicing base station on the originating carrier frequency despite a higher priority for the other of the first and second carrier frequencies, whenever adequate capacity is indicated in the excess capacity responses for the originating

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carrier frequency, as claimed by applicant. This particular feature is directed to channel allocation based on position or location. However, in a related field of endeavor, George teaches that channels can be allocated to a mobile location based on its location (see title; col. 1, line 65-col. 2, line 45). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Sharma with that of George for the advantage of avoiding a waste of channel capacity and an inter-zone link when communication is only required within one zone (see col. 1, lines 45-52).

As per claim 26: the computer readable medium wherein the set of instructions includes instructions that cause the wireless communication system to:

select the other of the carrier frequencies than the originating carrier frequency when inadequate capacity is indicated in the response for the originating carrier frequency reads on '871 (see fig. 6B, blocks 628 and 638). As flowchart of the computer instruction/algorithm indicates the other, other than the originating, frequencies can be selected if the NEC frequency is high.

As per claim 27: the features of claim 27 are similar to the features of claim 15. Hence, claim 27 is rejected on the same ground and motivation as claim 15.

As per claim 28: the features of claim 28 are similar to the features of claim 13. The difference between the two claims is that the first is a computer readable medium and the later, a method claim. The prior art shows algorithms to perform the method steps of claim 13 (see figs. 3-6B). Hence, claim 28 is rejected on the same ground and motivation as claim 13.

As per claim 29: the features of claim 29 are similar to the features of claim 15. Hence, claim 29 is rejected on the same ground and motivation as claim 15.

Response to Arguments

Applicant's arguments filed on 10/22/04 have been fully considered but they are not persuasive. The basis for applicant's argument is a lack of motivation/suggestion to combine the references applied to the obviousness rejection herein above. Argument by applicant and respective response by examiner appear as follow.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Sharma et al., as laid out in the body of the rejection of the claims, teaches a capacity based frequency channel/carrier allocation (see for instance, the abstract). In a related field of endeavor, Radio channel allocation based on location of mobile users, George teaches about a controller allocating a channel to a mobile radio in its home zone when the communication can be handled therein (see summary). So, the two references are related and hence, combinable. A suggestion for the combination is provided by

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George, for instance, avoiding unneeded allocation of a channel/carrier and/or avoiding waste of channel/carrier capacity (see col. 1, lines 45-57). The teaching of George, thus, can prompt one of ordinary skill in the art to modify Sharma's reference to an extent wherein Sharma's capacity based carrier allocation would take advantage of George's improved channel/carrier capacity. This is so, because Sharma does not teach about improving capacity. Rather, Sharma's reference is directed to allocating channel/carrier based on the available capacity. Therefore, the argument based on lack of suggestion is not persuasive.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meless N Zewdu whose telephone number is (703) 306-5418. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (703) 308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

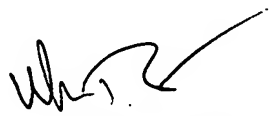
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Meless Zewdu

M. Z.

Examiner

23 February 2005.


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